

### **ABSTRACT OF THE DISCLOSURE**

A microstructured optical fibre has a core region with a material having a refractive index  $n_{co}$  and a microstructured region surrounding the core region with a background material having a refractive index  $n_m$  which is lower than the refractive index  $n_{co}$ . The microstructured region has a plurality of microstructures having a refractive index different from the refractive index  $n_m$ , wherein the distance  $\Delta\phi$  between the centers of any couple of adjacent microstructures is at least equal to about  $\lambda_p$  and not higher than about  $1.5\lambda_p$ , wherein  $\lambda_p$  is the spatial variation length of the electric field intensity in the microstructured region.